Introduction

This document defines the Command Line Interface (CLI) functionality supported in IP Navigator (IPN) and describes future plans for new commands. The CLI support is driven by the needs of the IP community to configure, monitor, and troubleshoot the IP routing features of Ascend switches without using the NAVIS Core GUI interface.

While NAVIS Core is not required, it is fully compatible with the CLI. The PRAM Upload capability is used to add CLI changes to the NAVIS Core database.

B-STDX Command Line Interface Support

IP Navigator supports over 150 set and show commands, as listed here. For more information on these commands, refer to appendix A of Configuring IP Services for B-STDX. Commands entered at the console immediately take effect on the switch. If it is desired that configuration changes to the switch are reflected in the NMS, a PRAM Compare and Upload must be performed from the NAVIS Core NMS station.

This table provides a summary of B-STDX Command Line Interface Commands.

Table A-2. Command Line Interface

Commands	Descriptions
get <oid string>	SNMP get
next <oid string>	SNMP next
set bgp aggregate <aggregate address>	Enables you to specify a BGP route summary
set bgp compare_med [enable | disable]	Enables MED comparison
set bgp as <as number>	Enables you to specify the local AS
set bgp always_compare_send_bgp_nets [enable | disable]	Enables you to allow BGP networks to be advertised
set bgp client_to_client [enable | disable]	Enables you to set client to client reflection for the peer
set bgp cluster_id <cluster id>	Enables you to specify a BGP cluster ID
set bgp def_local_preference <value>	Enables you to specify a value for the peer's default preference
set bgp neighbor <IP address> create	Enables you to create a BGP peer instance
set bgp neighbor <IP address> delete	Enables you to delete a BGP peer instance
set bgp neighbor <IP address> hold_interval <seconds>	Enables you to specify a BGP neighbor's hold interval time
set bgp neighbor <IP address> keepalive_interval <seconds>	Enables you to specify a BGP neighbor's keepalive interval time

set bgp neighbor <IP address> min_adv_interval <seconds>	Enables you to specify a BGP neighbor's minimum advertise interval time
set bgp neighbor <IP address> min_orig_interval <seconds>	Enables you to specify a BGP neighbor's minimum original interval time
set bgp neighbor <IP address> [remote_as <number>]	Enables you to specify a BGP neighbor's AS number
set bgp neighbor <IP address> retry_interval <seconds>	Enables you to specify a BGP neighbor's retry interval time
set bgp neighbor <IP address> route_reflector_client [enable | disable]	Enables you to specify a BGP neighbor as a route reflector client
set bgp neighbor <IP address> send_community [enable | disable]	Enables you to send community attributes to this BGP neighbor
set bgp neighbor <IP address> state [enable | disable]	Enables you to specify the BGP neighbor's state
set bgp neighbor <IP address> weight <weight>	Enables you to specify the weight associated with the BGP neighbor
set bgp network <network address>	Enables you to specify the network to be injected into BGP
set bgp state [enable | disable]	Enables you to specify the state of the BGP peer
set iplport <IP logical port #> [up | down]	Allows you to enable IP on a logical port
set ospf interface <IP address> [up | down]	Enables you to specify an OSPF interface
set ospf interface <IP address> area <IP address>	Enables you to specify an OSPF area
set ospf interface <IP address> type [ptp | ptmpt | broadcast | nbmal | virtual_link]	Enables you to define an interface on which OSPF runs
set ospf interface <IP address> auth_type [mdfive | simple | none]	Enables you to assign an authentication type
set ospf interface <IP address> transit_delay <delay>	Enables you to specify the transit delay
set ospf interface <IP address> router_priority <priority>	Enables you to specify the router priority
set ospf interface <IP address> tos_metric <metric>	Enables you to specify the type of service metric
set ospf interface <IP address> retransmit_intvl	Enables you to specify the

<interval>	retransit interval
set ospf interface <IP address> hello_intvl <interval>	Enables you to specify the hello interval
set ospf interface <IP address> router_dead_intvl <interval>	Enables you to specify the router dead interval
set ospf interface <IP address> poll_intvl <interval>	Enables you to specify the poll interval
set rip admin <IP address> [disable | enable]	Enables you to specify the interface's RIP admin state
set rip lport <IP address> <iplport>	Allows you to create RIP on the specified IP interface
set rip delete <IP address>	Enables you to delete RIP from the IP Interface
set rip sendhostrt <IP address> [disable | enable]	Enables you to send RIP host routes
set rip splithrz <IP address> [disable | simple | poiservs]	Enables you to specify RIP split horizon parameters
set rip version <IP address> [one | two]	Enables you to specify the RIP version
set rip send <IP address> [disable | one |onecomp | two]	Enables you to specify RIP send options
set rip receive <IP address> [disable | one | oneortwo | two]	Enables you to specify RIP receive options
set rip authtype <IP address> [disable | simple | mdfive]	Enables you to specify the RIP authentication type
set rip authkey <IP address> Òauth-keyÓ	Enables you to specify the RIP authentication key
set rip defmetric <IP address> <metric>	Enables you to specify the RIP default metric
set rip status <IP address> [active | delete]	Enables you to specify the RIP status
set rip srcaddr <IP address> <IP address>	Enables you to specify the RIP source address
show arp	Displays the ARP cache
show bgp aggregate	Displays BGP aggregates
show bgp neighbor	Displays BGP neighbors
show bgp network	Displays networks injected into BGP
show bgp rejects	Displays BGP rejects
show bgp route access-list <network address>	Displays access list routes

show bgp route as <network address>	Displays BGP AS routes
show bgp route community <network address>	Displays BGP community routes
show bgp route neighbor <network address>	Displays BGP neighbors
show bgp summary	Displays BGP summary
show card <slot #>	Displays the card configuration per slot
show external	Displays System External (ASE) OSPF Autonomous host table
show hardware	The Module Identification Memory (MIM) device allows you to use this command to remotely access your card to determine card type, hardware revision, serial number, manufacturing part number, and product code
show icmp	ICMP statistics
show ip route	Displays the current IP routing table
show ip route <ip address>	Displays an IP route's best match
show ip route <ip address> <net mask>	Displays an IP route's exact match
show ip route <ip address> <net mask>	Displays an IP route's all inclusive matches
show ip route bgp	Displays BGP routes
show ip route direct	Displays direct routes
show ip route ospf	Displays OSPF routes
show ip route rip	Displays RIP routes
show ip route static	Displays static routes
show ip route summary	Displays the IP routing table summary
show ip statistics	Displays IP statistics
show ipif	Displays all IP interfaces
show ipif <IP logical port #>	Displays an IP interface specified by the IP logical port #
show ipif <IP address>	Displays an IP interface specified by the IP address
show ipif slot <slot #>	Displays an IP interface specified by the card #
show ipfwd statistics card <slot #>	Displays IP statistics specified

	by the card number
show ipfwd statistics lport <lport #>	Displays IP statistics specified by the logical port number
show ipqos pvc	Displays IP QoS PVCs
show ipqos statistics <interface #>	Displays IP QoS statistics for a specific interface
show fltrbind [interface #] <filter>	Displays all filter bindings
show fltrtbl	Displays all filter entries
show lport attributes <interface #>	Displays logical port attributes
show lport statistics <interface #>	Displays logical port statistics
show mpt path <IP address>	Displays MPT path
show mpt all	Displays general information related to MPT
show mpt statistics	Displays MPT statistics
show ospf adv <link state types> <link state id> <adv.router>	Displays OSPF advertisements
show ospf adv <link state type> <link state ID> <adv.router> <area ID>	Displays OSPF advertisements
show ospf database absr-summary <area ID>	Displays area border router links
show ospf databases all <area ID>	Displays all OSPF databases
show ospf database external <area ID>	Displays external links
show ospf database names <area ID>	Displays OSPF names
show ospf database network <area ID>	Displays network links
show ospf database opaque <area ID>	Displays opaque
show ospf database router <area ID>	Displays router links
show ospf database summary <area ID>	Displays summary links
show ospf database trunks <area ID>	Displays OSPF trunks
show ospf database absr-summary <link state ID> <adv.router>	Displays area border router links
show ospf data external <link state ID> <adv.router>	Displays external links
show ospf database name <link state ID> <adv.router>	Displays OSPF names
show ospf database network <link state ID> <adv.router>	Displays network links
show ospf database opaque <link state ID> <adv.router>	Displays opaque
show ospf database router <link state ID> <adv.router>	Displays router links

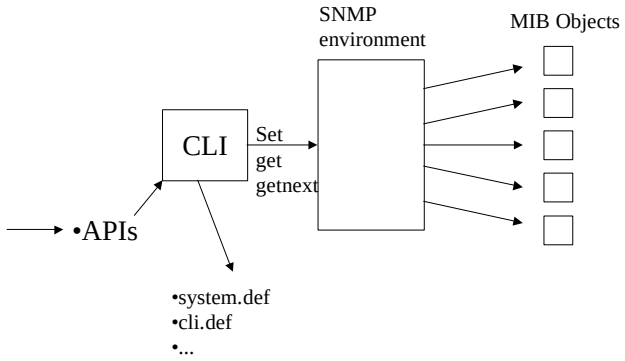
show ospf database summary <link state ID> <adv.router>	Displays summary links
show ospf database trunk <link state ID> <adv.router>	Displays OSPF trunks
show ospf database absr-summary <link state ID> <adv.router> <area ID>	Displays area border router links
show ospf database external <link state ID> <adv.router><area ID>	Displays external links
show ospf database network <link state ID> <adv.router> <area ID>	Displays network links
show ospf database opaque <link state ID> <adv.router> <area ID>	Displays opaque
show ospf database router <link state ID> <adv.router> <area ID>	Displays router links
show ospf database summary <link state ID> <adv.router> <area ID>	Displays summary links
show ospf database trunks <link state ID> <adv.router> <area ID>	Displays OSPF trunks
show ospf interface	Displays OSPF interface information
show ospf names	Displays OSPF names
show ospf namedpath <type> <name> <bit length>	Displays OSPF named path
show ospf namedpath <type> <name> <bit length> <slot ID>	Displays OSPF named path
show ospf neighbor	Displays OSPF neighbors
show ospf pathdb <slot ID>	Displays OSPF pathdb
show ospf pathdb <switch ID>	Displays OSPF pathdb
show ospf pathdb <switch ID> <interface #>	Displays OSPF pathdb
show ospf pathdb <switch ID> <interface #> <slot ID>	Displays OSPF pathdb
show ospf qospath <IP address>	Displays OSPF QoS paths
show ospf qospath <IP address> <slot ID>	Displays OSPF QoS paths
show ospf statistics <slot ID>	Displays OSPF statistics
show ospf statistics <slot ID> <area ID>	Displays OSPF statistics
show ospf trunks <switch ID>	Displays OSPF trunks
show ospf trunks <interface #>	Displays OSPF trunks
show ospf trunks <switch ID> <interface #> <slot ID>	Displays OSPF trunks
show ospf trunks <qos>	Displays OSPF trunks

show ospf trunks <qos> <priority>	Displays OSPF trunks
show ospf vcpath <IP address>	Displays OSPF virtual circuit paths
show ospf vcpath <IP address> <slot ID>	Displays OSPF virtual circuit paths
show policy interface	Displays the interface to route map association
show policy neighbor	Displays the neighbor to route map association
show policy netfilter	Displays all the configured network filters
show policy netlist	Displays all the network filter lists and the network filters contained by each list
show policy routemap	Displays all route maps
show pport attributes <slot.port>	Displays physical port attributes
show pport statistics <slot.port>	Displays physical port statistics
show pvc attributes <interface.dlci>	Displays PVC attributes
show pvc statistics <interface.dlci>	Displays PVC statistics
show rip attributes <IP interface #>	Displays RIP attributes
show rip attributes all	Displays RIP attributes
show rip peer <IP interface #>	Displays RIP peers
show rip peer all	Displays RIP peers
show rip statistics <IP interface #>	Displays RIP statistics
show rip statistics all	Displays RIP statistics
show software disk <slot #>	Displays disk files for CP ONYX
show software disk all	Displays disk files for CP-ONYX
show software flash <slot #>	Displays version information for files on PCMCIA disks
show software flash all	Displays version information for files on PCMCIA disks
show software card <slot #>	Displays version information for software running on a card
show software card all	Displays version information for software running on a card

show system	Displays general system information and status
show tcp	TCP statistics
show udp	UDP statistics
show users	Displays current users logged on the switch through the console or telnet

Jade CLI Release

The Jade release of the CLI will make use of an updated architecture that enables Ascend to design and release new commands more quickly. The new architecture uses a series of CLI routines and libraries that are common to all commands. Standard libraries consisting of command definitions such as “cli.def” and “system.def” parse commands entered at the console. These commands are then passed to the SNMP environment where *copies* of the MIB objects are updated and verified for accuracy. The actual MIB objects are then updated and the changes are committed to memory. In addition to Ascend-provided commands and “show” screens, user scripts and macros can make use of the CLI routines. Commands not



recognized by the CCP will be passed to the 5.0 CLI routines until all commands are supported by the CCP.

As new IP features are added to IP Navigator, they will be supported via the CLI.